REMARKS

The Office Action mailed February 26, 2004, has been carefully reviewed and

Applicants note with appreciation the identification of allowable subject matter in claims 2-7.

However, in that Applicants remain convinced that claims 1 and 8 are also in condition for

allowance as filed, reconsideration is requested as set forth below.

Claims 1-8 are pending in the application.

The Examiner rejected claims 1 and 8 under 35 U.S.C. 103(a) as being unpatentable

over U.S. Patent No. 5,686,963 to Uz et al. ("Uz"). The Examiner objected to claims 2-7 as being

dependent upon a rejected base claim, but stated that claims 2-7 would be allowable if rewritten in

independent form including all of the limitations of the base claim and any intervening claims.

The present invention relates to a method for video encoding by utilizing an intra

updating technique based on error probabilities estimated from a size of the bit stream for each

block. More specifically, an encoding method is chosen for each frame of incoming images, with

the images being divided into blocks of a certain size. Either an intra coded block encoding or an

inter coded block encoding is performed depending on whether an encoding of a current frame and

an inter coded encoding is needed, and on whether an intra coded block is relevant. If the inter

coded encoding is needed, blocks requiring an intra updating are sorted out by utilizing bit stream

size information for each block. This is not fairly shown or suggested by the prior art.

Uz is directed to a method for performing rate control for an MPEG-2 compliant

encoder. The purpose of rate control is to maximize the perceived quality of the encoded video

when it is decoded at a decoder by intelligently allocating the number of bits used to encode each frame and each macro block. This does not relate to the present invention.

The Examiner has made reference to the "scene change detection" discussion at column 11, line 12 to column 12, line 8 of Uz, which effects the modification of the rate control algorithm. As discussed therein, the encoder can detect scene changes and the rate control algorithm is modified as a result of such changes (see column 5, lines 30-32). Several parameters, e.g., average total activity, deviation from the average total activity and average motion estimation score, etc., are used for detecting the scene changes. These parameters are obtained using factors such as absolute differences between the pixels in macro blocks. However, Uz does not teach a video encoder that sorts out blocks requiring an intra updating by utilizing bit stream size information for each block when inter encoding is needed. The size considerations discussed at column 11 are limited to frame budgeting *in the context of rate control* and are wholly insufficient to suggest the intra updating technique based on error probabilities estimated from the size of bit stream information for each block, as set forth in claims 1 and 8.
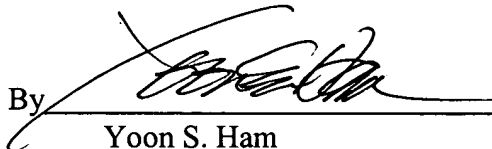
For at least the foregoing reasons, the video encoding method as set forth in claims 1 and 8 is not shown or suggested by the prior art but is patentable thereover. Favorable reconsideration is requested. Claims 2-7 are also in condition for allowance in accordance with the Examiner's identification of allowable subject matter and as claims properly dependent on an allowable base claim.

As set forth above, the application is in condition for allowance. Should the

Examiner have any questions or comments, the Examiner is cordially invited to telephone the

undersigned attorney so that the present application can receive an early Notice of Allowance.

Respectfully submitted,

JACOBSON HOLMAN PLLC

By _____
Yoon S. Ham
Reg. No. 45,307

400 Seventh Street, N.W.
Washington, D.C. 20004
Telephone: (202) 638-6666
Date: May 25, 2004
YSH:SCB